10684994

```
=> d his

     (FILE 'HOME' ENTERED AT 10:54:39 ON 23 JUN 2004)

     FILE 'REGISTRY' ENTERED AT 10:54:56 ON 23 JUN 2004
L1                STRUCTURE UPLOADED
L2             11 S L1
L3            260 S L1 SSS FULL

     FILE 'CAPLUS' ENTERED AT 10:56:26 ON 23 JUN 2004
L4            179 S L3
L5                STRUCTURE UPLOADED
                  S L5

     FILE 'REGISTRY' ENTERED AT 10:59:38 ON 23 JUN 2004
L6             10 S L5  SUB=L3 SAMPLE

     FILE 'CAPLUS' ENTERED AT 10:59:43 ON 23 JUN 2004
L7             17 S L6 SUBSET=L3

     FILE 'REGISTRY' ENTERED AT 11:00:11 ON 23 JUN 2004

     FILE 'CAPLUS' ENTERED AT 11:00:52 ON 23 JUN 2004

     FILE 'REGISTRY' ENTERED AT 11:01:36 ON 23 JUN 2004
L8            198 S L5 SSS FULL SUB=L3

     FILE 'CAPLUS' ENTERED AT 11:02:05 ON 23 JUN 2004
L9            165 S L8
L10            21 S L9 AND PATENT/DT

     FILE 'REGISTRY' ENTERED AT 11:05:51 ON 23 JUN 2004
L11               STRUCTURE UPLOADED
L12             1 S L11  SUB=L8 SAMPLE
L13             6 S L11 SSS FULL SUB=L8

     FILE 'CAPLUS' ENTERED AT 11:08:05 ON 23 JUN 2004
L14            10 S L13
L15            10 S L14 NOT L10
                  S L1

     FILE 'REGISTRY' ENTERED AT 11:08:56 ON 23 JUN 2004
L16            11 S L1

     FILE 'CAPLUS' ENTERED AT 11:08:56 ON 23 JUN 2004
L17            19 S L16

=> d l1
L1 HAS NO ANSWERS
L1                STR
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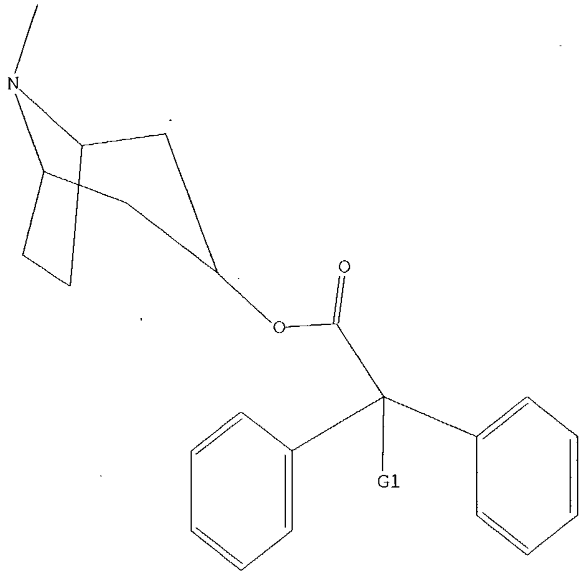

G1 C,O,X

Structure attributes must be viewed using STN Express query preparation.

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=> d l5
L5 HAS NO ANSWERS
L5                STR
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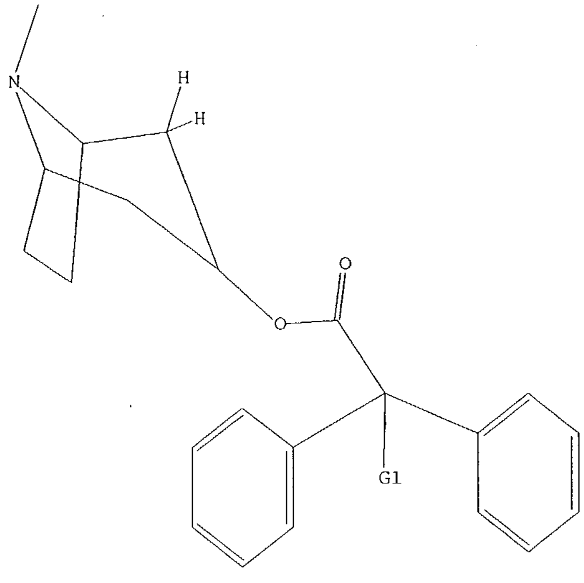
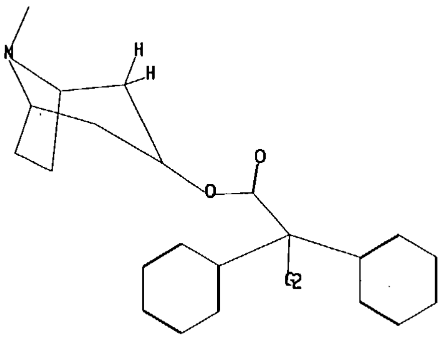
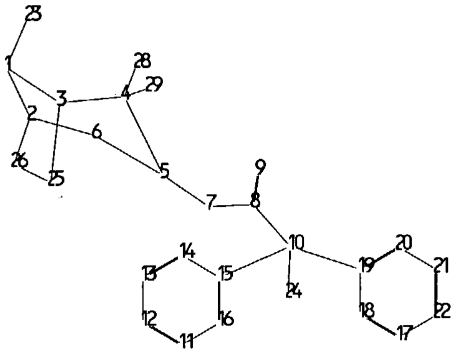


G1 C,O,X

\STNEXP4\QUERIES\10684994b.str





```
ain nodes :
  7  8  9  10  23  24  28  29
ng nodes :
  1  2  3  4  5  6  11  12  13  14  15  16  17  18  19  20  21  22  25  26
ain bonds :
  1-23  4-28  4-29  5-7  7-8  8-9  8-10  10-15  10-19  10-24
ng bonds :
  1-2  1-3  2-6  2-26  3-4  3-25  4-5  5-6  11-12  11-16  12-13  13-14  14-15  15-16  17-18
  17-22  18-19  19-20  20-21  21-22  25-26
act/norm bonds :
  1-2  1-3  1-23  2-6  3-4  4-5  5-6  5-7  7-8  8-9  10-24
act bonds :
  2-26  3-25  4-28  4-29  8-10  10-15  10-19  25-26
rmalized bonds :
  11-12  11-16  12-13  13-14  14-15  15-16  17-18  17-22  18-19  19-20  20-21  21-22
olated ring systems :
  containing 1 :



:CH3,Et,F

tch level :
  1:Atom  2:Atom  3:Atom  4:Atom  5:Atom  6:Atom  7:CLASS  8:CLASS  9:CLASS  10:CLASS
  11:Atom  12:Atom  13:Atom  14:Atom  15:Atom  16:Atom  17:Atom  18:Atom  19:Atom  20:Atom
  21:Atom  22:Atom  23:CLASS  24:CLASS  25:Atom  26:Atom  28:CLASS  29:CLASS
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```
L10  ANSWER 1 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:216888  CAPLUS
DN   138:243292
TI   Mucosal compositions containing flutropium and vasoconstrictor
IN   Okudaira, Ichiro; Ichihara, Takashi; Nakagami, Joji; Aikawa, Katsuyoshi;
     Nakagawa, Yasuo
PA   Taisho Pharmaceutical Co., Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 5 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   JP 2003081833      A2   20030319      JP 2001-277609   20010913
PRAI JP 2001-277609          20010913
AB   The invention relates to a mucosal composition, e.g. a nasal drop, eye drop,
     and inhalant, etc., for treatment of excess mucosal discharge, wherein the
     composition is characterized by containing flutropium and a vasoconstrictor.  A eye
     drop composition was prepared from dl-methylephedrine hydrochloride 1000,
     flutropium bromide 200, prednisolone 10, dl-camphor 5000, NaCl 9000, Me
     paraben 5000 mg, and water balance to 1L.
IT   63516-07-4, Flutropium bromide
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (mucosal compns. containing flutropium and vasoconstrictors for treatment
        of excess mucosal discharge)
RN   63516-07-4  CAPLUS
CN   8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-
     [(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI)
     (CA INDEX NAME)

Relative stereochemistry.
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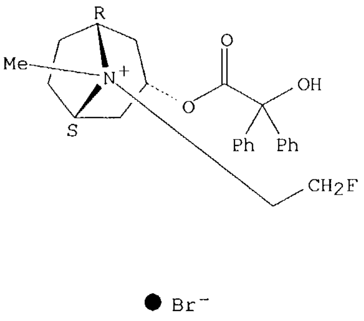

```
L10  ANSWER 2 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2003:19961  CAPLUS
DN   138:78464
TI   Pharmaceutical preparations based on active ingredients susceptible to
     illicit administration
IN   Garavani, Alberto; Marchiorri, Maurizio; Di Martino, Alessandro
PA   Altergon S.A., Switz.
SO   Eur. Pat. Appl., 11 pp.
     CODEN: EPXXDW
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   EP 1273301         A2   20030108      EP 2002-15073    20020705
     EP 1273301         A3   20030409
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK
PRAI IT 2001-MI11446   A     20010706
AB   Disclosed are pharmaceutical formulations for oral administration,
     preferably in the form of a soft capsule enclosing an active principle
     susceptible to illicit administration and at least one pharmaceutically
     acceptable organoleptic marker which is particularly evident for its odor,
     taste or color or for its scarce miscibility with food.  The active
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principle is selected from the group consisting of a substance acting on the central nervous system and/or as a narcotic and of a substance with anabolizing activity or the like. The organoleptic marker is independently selected out of one or more substances belonging to the group consisting of flavoring agents, flavoring agents, coloring agents, odorants, and oils.

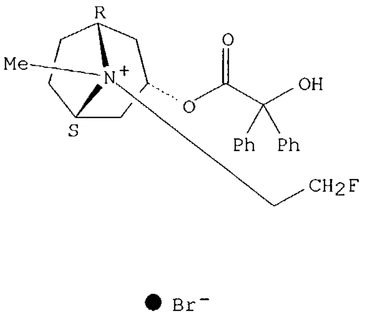
IT **63516-07-4**, Flutropium bromide

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(pharmaceutical prepns. based on active ingredients susceptible to illicit administration containing organoleptic markers)

RN 63516-07-4 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



L10 ANSWER 3 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2002:971051 CAPLUS

DN 138:44715

TI Topical compositions containing parasympathetic blockers and volatile essential oils

IN Kubo, Kyoko; Ichihara, Takashi; Okudaira, Ichiro; Nakagami, Joji; Aikawa, Katsuyoshi

PA Taisho Pharmaceutical Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF

DT **Patent**

LA Japanese

```
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   JP 2002370977      A2   20021224      JP 2001-180926   20010615
PRAI JP 2001-180926          20010615
```

AB This invention relates to topical compns. comprising ipratropium bromide, flutropiium bromide, or salts thereof and volatile essential oil components selected from the group consisting of menthol, camphor, peppermint oil, and eucalyptus oil. The compns. are preferably in the forms of nasal sprays and inhalants. The compns. minimize the unpleasant feel and irritation during application. For example, a nasal solution contained ipratropium bromide 100, l-menthol 5000, benzalkonium chloride 100, NaCl 9000, ethoxylated hydrogenated castor oil 200 mg, NaOH q.s. to pH 7, and distilled water to 1 L.

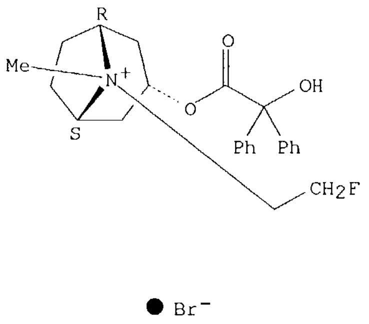
IT **63516-07-4**, Flutropium bromide

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(topical compns. containing ipratropium bromide or flutropiium bromide and volatile essential oil)

RN 63516-07-4 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



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L10  ANSWER 4 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2002:869590  CAPLUS
DN   137:363087
TI   Novel anticholinergic compounds for the treatment of incontinence and
     other disorders
IN   Druzgala, Pascal
PA   USA
SO   U.S. Pat. Appl. Publ., 21 pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.       KIND  DATE          APPLICATION NO.  DATE
     ---------------  ----  --------      ---------------  --------
PI   US 2002169208     A1   20021114      US 2002-116202   20020403
     WO 2002096855     A2   20021205      WO 2002-US10614  20020403
     WO 2002096855     A3   20030213
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH,
             PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ,
             UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU,
             TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     EP 1383730        A2   20040128       EP 2002-774092   20020403
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
PRAI US 2001-281134P   P    20010403
     US 2002-350516P   P    20020118
     WO 2002-US10614   W    20020403
OS   MARPAT 137:363087
AB   In a preferred embodiment, the subject invention concerns novel analogs of
     oxybutynin.  The present invention also concerns methods for synthesizing
     the oxybutynin analogs of the present invention.  The invention also
     pertains to methods for treating patients suffering from incontinence and
     other conditions.
IT   475090-89-2 475090-90-5
     RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (novel anticholinergic compds. for treatment of incontinence and other
        disorders)
RN   475090-89-2  CAPLUS
CN   Benzeneacetic acid, α-hydroxy-3-(methoxycarbonyl)-α-phenyl-,
     8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI)  (CA INDEX NAME)
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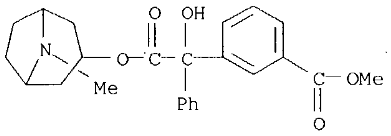

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RN   475090-90-5  CAPLUS
CN   8-Azoniabicyclo[3.2.1]octane, 3-[[hydroxy[3-(methoxycarbonyl)phenyl]phenyl
     acetyl]oxy]-8,8-dimethyl- (9CI)  (CA INDEX NAME)
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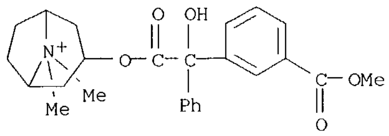

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L10  ANSWER 5 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2002:291678  CAPLUS
DN   136:310064
TI   Procedures for the production of new anticholinergics, and their use as
     drugs
IN   Meissner, Helmut; Morschhaeuser, Gerd; Pieper, Helmut; Pohl, Gerald;
     Reichl, Richard; Speck, Georg
PA   Boehringer Ingelheim Pharma K.-G., Germany
SO   Ger. Offen., 28 pp.
     CODEN: GWXXBX
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.          KIND  DATE           APPLICATION NO.   DATE
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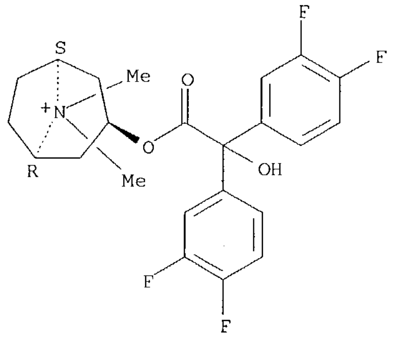
PI   DE 10050995          A1   20020418       DE 2000-10050995  20001014
     WO 2002032898        A2   20020425       WO 2001-EP11243   20010928
     WO 2002032898        A3   20021212
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
             GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
             LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
             PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
             US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     AU 2002013977        A5   20020429       AU 2002-13977     20010928
     US 2002119991        A1   20020829       US 2001-965766    20010928
     EP 1328524           A2   20030723       EP 2001-982378    20010928
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
     JP 2004511556        T2   20040415       JP 2002-536280    20010928
PRAI DE 2000-10050995     A    20001014
     US 2000-249350P      P    20001116
     WO 2001-EP11243      W    20010928
OS   CASREACT 136:310064; MARPAT 136:310064
GI


* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY -  AVAILABLE VIA OFFLINE PRINT *

AB   The present invention concerns new anticholinergics I [A = CH2CH2, CH:CH,
     oxirane-2,3-diyl; X- = simple anion; R1, R2 = C1-4-alkyl,
     C1-4-hydroxyalkyl, C1-4-haloalkyl; R3, R4, R5, R6= H, C1-4-alkyl,
     C1-4-alkoxy, OH, CF3, CN, NO2, halogen, whereby at least one of R3 - R6
     ≠ H] as an optically active isomers, as mixts. of enantiomers or as
     racemates, procedures for their production as well as their use as drugs.
     Thus, the diphenylglycolate II·Br- was prepared from tropenol via
     transesterification of Et bis(3,4-difluorophenyl)glycolate followed by
     quaternization with MeBr in CH2Cl2/MeCN.  Pharmaceutical formulations, for
     the use of I in tablets, ampuls, aerosols, solns. and inhalants, are
     presented.
IT   412030-83-2P 412030-86-5P
     RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
     study); PREP (Preparation); USES (Uses)
        (prepared of alkaloid diphenylglycolates as anticholinergics)
RN   412030-83-2  CAPLUS
CN   8-Azoniabicyclo[3.2.1]octane, 3-[[bis(3,4-difluorophenyl)hydroxyacetyl]oxy
```

]-8,8-dimethyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.

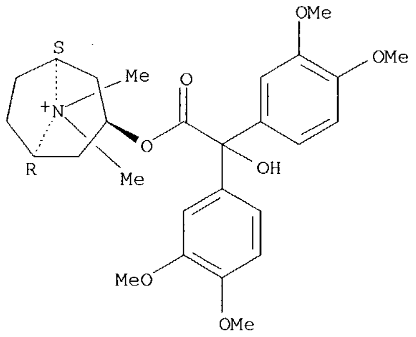


● Br⁻

RN 412030-86-5 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 3-[[bis(3,4-dimethoxyphenyl)hydroxyacetyl]oxy]-8,8-dimethyl-, bromide, (3-endo)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● Br⁻

IT **412031-06-2P 412031-12-0P**

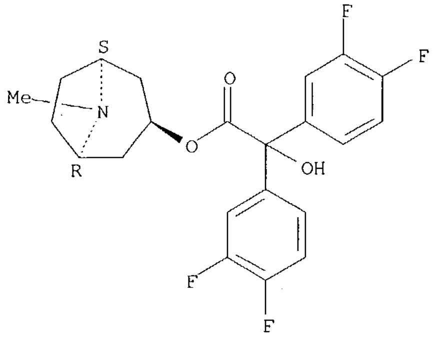
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and quaternization with Me bromide; prepared of alkaloid diphenylglycolates as anticholinergics)

RN 412031-06-2 CAPLUS

CN Benzeneacetic acid, α-(3,4-difluorophenyl)-3,4-difluoro-α-hydroxy-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



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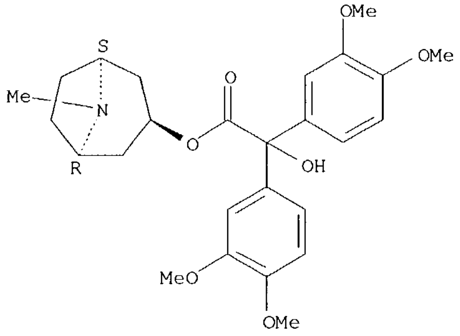
RN   412031-12-0  CAPLUS
CN   Benzeneacetic acid, α-(3,4-dimethoxyphenyl)-α-hydroxy-3,4-
     dimethoxy-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI)  (CA
     INDEX NAME)

Relative stereochemistry.
```



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RE.CNT  6      THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
               ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10  ANSWER 6 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2001:525915  CAPLUS
DN   135:127155
TI   Screening constitutive androstane receptor (CAR) modulators for treatment
     of hypercholesterolemia associated diseases
IN   Lehmann, Jurgen M.; Shiau, Andrew Kwan-Nan
PA   Tularik Inc., USA
SO   PCT Int. Appl., 75 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
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PI   WO 2001051045      A2   20010719      WO 2001-US1111   20010112
     WO 2001051045      A3   20011220
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU,
             SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN,
             YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     US 2002152479      A1   20021017      US 2001-760364   20010112
PRAI US 2000-176398P    P    20000113
AB   This invention provides methods that are useful for identifying
     therapeutic agents for the treatment of a constitutive androstane receptor
     (CAR)-mediated disorder or condition.  The methods include determining whether
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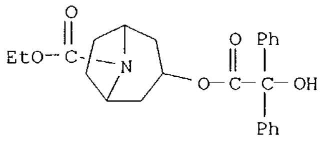
the candidate therapeutic agent can: interact directly with CAR, modulate CAR-mediated gene expression, decrease CAR antagonist elevation of a cholesterol indicator in a mammal, or decrease a cholesterol level indicator in a mammal with a defective CAR. Also provided are CAR agonists. The invention also provides methods for producing a transgenic mouse having a genome with a disrupted CAR allele. The invention further provides methods for treating a CAR-mediated disorder or condition such as hypercholesterolemia, lipid disorders, atherosclerosis, and cardiovascular disorders.

IT **351153-66-7**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(CAR agonist; screening constitutive androstane receptor (CAR) modulators for treatment of hypercholesterolemia associated diseases)

RN 351153-66-7 CAPLUS

CN 8-Azabicyclo[3.2.1]octane-8-carboxylic acid, 3-[(hydroxydiphenylacetyl)oxy]-, ethyl ester (9CI) (CA INDEX NAME)



L10 ANSWER 7 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN

AN 2001:137173 CAPLUS

DN 134:178396

TI Synthesis, activity and formulations of pharmaceutical compounds for treatment of oxidative stress and/or endothelial dysfunction

IN Del Soldato, Piero

PA Nicox S.A., Fr.

SO PCT Int. Appl., 94 pp.
CODEN: PIXXD2

DT **Patent**

LA English

FAN.CNT 1

```
     PATENT NO.          KIND    DATE          APPLICATION NO.   DATE
     ---------------     ----    --------      ---------------   --------
PI   WO 2001012584        A2     20010222      WO 2000-EP7225    20000727
     WO 2001012584        A3     20020829
         W:  AE, AL, AU, BA, BB, BG, BR, CA, CN, CR, CU, CZ, DM, EE, GD, GE,
             HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG,
             MK, MN, MX, NO, NZ, PL, RO, SG, SI, SK, TR, TT, UA, US, UZ, VN,
             YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     BR 2000013264        A      20020416      BR 2000-13264     20000727
     EP 1252133           A2     20021030      EP 2000-953102    20000727
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO, MK, CY, AL
     JP 2003515526        T2     20030507      JP 2001-516885    20000727
     ZA 2002000628        A      20030423      ZA 2002-628       20020123
     NO 2002000623        A      20020409      NO 2002-623       20020208
PRAI IT 1999-MI1817       A      19990812
     WO 2000-EP7225       W      20000727
```

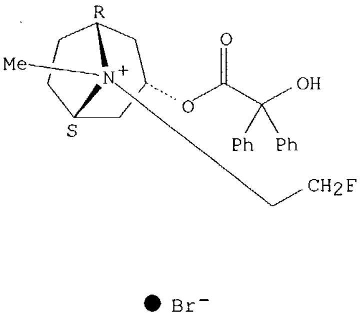
OS MARPAT 134:178396

AB Compds. or their salts of general formula (I): A-B-N(O)s wherein: s is an integer equal to 1 or 2; A = R-T1-, wherein R is the drug radical and T1 = (CO)t or (X)t', wherein X = O, S, NR1c, R1c is H or a linear or branched alkyl or a free valence, t and t' are integers and equal to zero or 1, with the proviso that t = 1 when t' = 0; t = 0 when t' = 1; B = -TB -X2-O- wherein TB = (CO) when t = 0, TB = X when t' = 0, X being as above defined; X2, bivalent radical, is such that the precursor drug of A and the precursor of B meet resp. the pharmacol. tests described in the description. Synthesis, activity and formulations of pharmaceutical compds. for treatment of oxidative stress and/or endothelial dysfunction are disclosed. The precursors are such as to meet the pharmacol. test reported in the description.

IT **63516-07-4**, Flutropium bromide

```
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (bronchodilator; synthesis, activity and formulations of pharmaceutical
        compds. for treatment of oxidative stress and/or endothelial
        dysfunction)
RN   63516-07-4  CAPLUS
CN   8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-
     [(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI)
     (CA INDEX NAME)

Relative stereochemistry.
```



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L10  ANSWER 8 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2000:742057  CAPLUS
DN   133:309791
TI   Synthesis, activity and formulations of pharmaceutical compounds for
     treatment of oxidative stress and/or endothelial dysfunction
IN   Del Soldato, Piero
PA   Nicox S.A., Fr.
SO   PCT Int. Appl., 140 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   WO 2000061541      A2   20001019      WO 2000-EP3239   20000411
     WO 2000061541      A3   20010927
         W:  AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, DM, EE, GE, HR, HU, ID,
             IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MA, MG, MK, MN, MX,
             NO, NZ, PL, RO, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,
             DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     IT 1311923         B1   20020320      IT 1999-MI752    19990413
     BR 2000009703      A    20020108      BR 2000-9703     20000411
     EP 1169298         A2   20020109      EP 2000-926870   20000411
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     JP 2002541236      T2   20021203      JP 2000-610818   20000411
     TR 200102928       T2   20021223      TR 2001-20010292820000411
     NZ 514270          A    20040227      NZ 2000-514270   20000411
     ZA 2001008126      A    20030403      ZA 2001-8126     20011003
     NO 2001004928      A    20011213      NO 2001-4928     20011010
PRAI IT 1999-MI752      A    19990413
     WO 2000-EP3239     W    20000411
OS   MARPAT 133:309791
AB   Synthesis, activity and formulations of pharmaceutical compds. for
     treatment of oxidative stress and/or endothelial dysfunction are
     disclosed.  The precursors are such as to meet the pharmacol. test
     reported in the description.
IT   63516-07-4, Flutropium bromide
     RL: RCT (Reactant); RACT (Reactant or reagent)
        (bronchodilator; synthesis, activity and formulations of pharmaceutical
        compds. for treatment of oxidative stress and/or endothelial
        dysfunction)
RN   63516-07-4  CAPLUS
CN   8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-
```

```
     [(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI)
     (CA INDEX NAME)

Relative stereochemistry.
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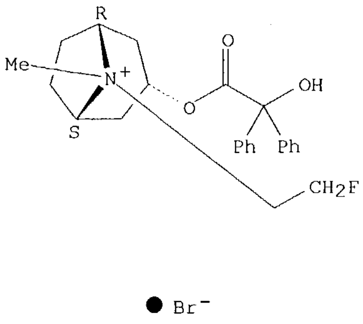

```
L10  ANSWER 9 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1998:724154  CAPLUS
DN   130:43383
TI   Pharmaceutical compositions containing cholinergic antagonists and
     ketotifen or epinastine for hypersecretion of airway
IN   Okudaira, Ichiro; Sumida, Kenji
PA   Taisho Pharmaceutical Co., Ltd., Japan
SO   Jpn. Kokai Tokkyo Koho, 7 pp.
     CODEN: JKXXAF
DT   Patent
LA   Japanese
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.   DATE
     ---------------   ----  --------      ---------------   --------
PI   JP 10298107        A2   19981110      JP 1997-109334    19970425
PRAI JP 1997-109334          19970425
AB   The compns. containing (a) cholinergic antagonists and (b) ketotifen,
     epinastine, and/or their salts are useful for suppressing hypersecretion
     of airway, e.g. nasal mucus, in cold, allergic rhinitis, etc.  Oral
     administration of an aqueous solution containing total belladonna alkaloids and
     ketotifen fumarate to rats strongly inhibited airway secretion.
IT   216587-35-8
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES
     (Uses)
        (airway hypersecretion inhibitors containing cholinergic antagonists and
        ketotifen or epinastine)
RN   216587-35-8  CAPLUS
CN   8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-
     [(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)-, mixt.
     with 4,9-dihydro-4-(1-methyl-4-piperidinylidene)-10H-
     benzo[4,5]cyclohepta[1,2-b]thiophen-10-one (2E)-2-butenedioate (1:1) (9CI)
       (CA INDEX NAME)

     CM   1

     CRN  63516-07-4
     CMF  C24 H29 F N O3 . Br

Relative stereochemistry.
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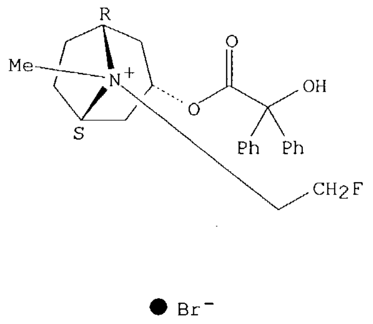

```
     CM   2

     CRN  34580-14-8
     CMF  C19 H19 N O S . C4 H4 O4

          CM   3

          CRN  34580-13-7
          CMF  C19 H19 N O S
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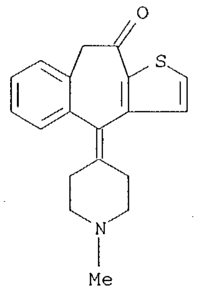

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          CM   4

          CRN  110-17-8
          CMF  C4 H4 O4

Double bond geometry as shown.
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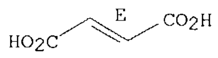

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L10  ANSWER 10 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1996:181570  CAPLUS
DN   124:233011
TI   Preparation of glycoside prodrugs with enhanced water solubility.
IN   Klemke, R.-Erich; Koreeda, Masato; Houston, Todd A.; Shull, Brian K.;
     Tuinman, Roeland J.
PA   Harrier, Inc., USA
SO   PCT Int. Appl., 51 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 4
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   WO 9532981         A1   19951207      WO 1995-US7027   19950601
         W:  AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KE, KG,
             KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MW, MX, NO, NZ, PL, RO,
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RU, SD, SI, SK, TJ, TT, UA, UZ, VN
RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
SN, TD, TG

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US 5693767	A	19971202	US 1994-251869	19940601
	AU 9526617	A1	19951221	AU 1995-26617	19950601
PRAI	US 1994-251869	A	19940601		
	US 1991-644002	A2	19910122		
	US 1991-733915	B2	19910722		
	US 1992-815691	B2	19920124		
	US 1993-6447	B2	19930121		
	WO 1995-US7027	W	19950601		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

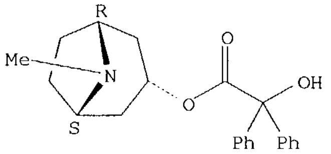
AB Glycosides of aliphatic, alicyclic, aliphatic-aromatic, and aromatic aglycons having primary, secondary, or tertiary OH, SH, or CO2H groups with 2,3-dideoxy-α-D-erythrohex-2-enopyranoside fragments Q1-Q6 (A = acyl; X = O, S, CO2), were prepared Thus, a mixture of 4-acetamidophenol and hexaacetyl D-maltal was refluxed with iodine in THF for 12 h to give 30% of an α,β-glycoside, which was stirred with Ba(OH)2 in MeOH to give glycoside (I). I had 8 times the H2O solubility of tylenol itself in phosphate-buffered saline at pH 7.4.

IT **3736-36-5DP,** Tropine benzilate, dideoxyhexenopyranoside glycoside derivative
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of glycoside prodrugs with enhanced water solubility)

RN 3736-36-5 CAPLUS

CN Benzeneacetic acid, α-hydroxy-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



L10 ANSWER 11 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:434333 CAPLUS

DN 119:34333

TI Antitussive and expectorant compositions containing anticholinergics

IN Takeda, Nobuo

PA ND New Drug Development Institute Inc., Japan

SO Can. Pat. Appl., 16 pp.
CODEN: CPXXEB

DT **Patent**

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CA 2076114	AA	19930228	CA 1992-2076114	19920813
PRAI	JP 1991-205502		19910827		

AB An inhalation-type antitussive and expectorant composition comprises a quaternary ammonium-type anticholine compound, preferably flutropium bromide (I). An inhalant with a quant. propellant dispenser (30 μg I/spout) contained I fine powder 0.05, soybean lecithin 0.1, and Freon 12/Freon 11 (70/30) 100 parts.

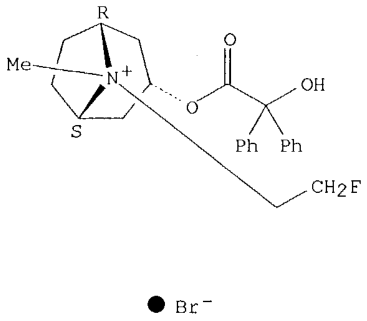
IT **63516-07-4,** Flutropium bromide
RL: BIOL (Biological study)
(antitussive and expectorant inhalants containing)

RN 63516-07-4 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI)

(CA INDEX NAME)

Relative stereochemistry.



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L10  ANSWER 12 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1993:428006  CAPLUS
DN   119:28006
TI   Preparation of tropanyl methobromide esters and analogs as
     anticholinergics
IN   Banholzer, Rolf; Bauer, Rudolf; Reichl, Richard
PA   Boehringer Ingelheim KG, Germany
SO   Ger. Offen., 21 pp.
     CODEN: GWXXBX
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.       KIND  DATE          APPLICATION NO.   DATE
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PI   DE 4108393        A1   19920917      DE 1991-4108393   19910315
     CA 2105575        AA   19920916      CA 1992-2105575   19920305
     WO 9216528        A1   19921001      WO 1992-EP489     19920305
         W:  AU, CA, CS, FI, HU, JP, KR, NO, PL, US
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, MC, NL, SE
     AU 9213457        A1   19921021      AU 1992-13457     19920305
     AU 662128         B2   19950824
     EP 579615         A1   19940126      EP 1992-905643    19920305
         R:  AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, MC, NL, SE
     HU 65132          A2   19940428      HU 1993-2611      19920305
     JP 06505718       T2   19940630      JP 1992-505496    19920305
     JP 3352684        B2   20021203
     CZ 281509         B6   19961016      CZ 1993-1917      19920305
     PL 179673         B1   20001031      PL 1992-300630    19920305
     SK 281511         B6   20010409      SK 1993-949       19920305
     AT 202778         E    20010715      AT 1992-905643    19920305
     ES 2160577        T3   20011116      ES 1992-905643    19920305
     ZA 9201875        A    19930913      ZA 1992-1875      19920313
     IL 101225         A1   19960514      IL 1992-101225    19920313
     NO 9303274        A    19931112      NO 1993-3274      19930914
     US 5654314        A    19970805      US 1995-412407    19950328
     US 5770738        A    19980623      US 1995-412408    19950328
     GR 3036792        T3   20020131      GR 2001-401654    20011004
PRAI DE 1991-4108393   A    19910315
     WO 1992-EP489     A    19920305
     US 1993-117199    B1   19931202
OS   MARPAT 119:28006
GI
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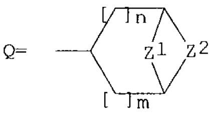


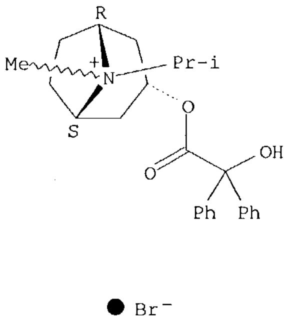
AB   ZCO2A [A = bicyclic group Q; Z = CR1R2R3; R1 = H, OH, CH2OH, alkyl, alkoxy; R2, R3 = Ph, thienyl, furyl, pyridyl, (cyclo)alkyl, etc.; CR2R3 = annelated cycloalkyl or heterocyclyl; Z1 = CH2, NR, etc.; R = (halo)alkyl, hydroxyalkyl; Z2 = (CH2)2-3, CH:CH, 2,3-oxiranediyl, etc.; m = 0-2; n = 1, 2; m + n = ≤ 3] were prepared as anticholinergics (no data). Thus, ClCPh2COCl was condensed with scopine and the product condensed with MeBr to give benzilic acid scopine ester methobromide.

IT **103672-12-4P 106885-67-0P 145616-96-2P**
145680-80-4P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as anticholinergic)

RN 103672-12-4 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 3-[(hydroxydiphenylacetyl)oxy]-8-methyl-8-(1-methylethyl)-, bromide, endo- (9CI) (CA INDEX NAME)

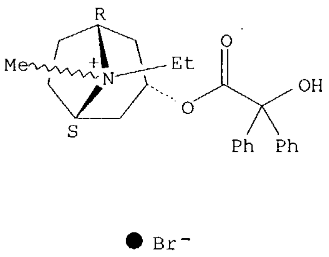
Relative stereochemistry.



RN 106885-67-0 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-ethyl-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, endo- (9CI) (CA INDEX NAME)

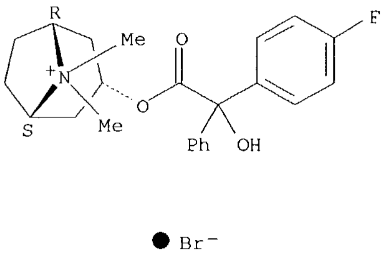
Relative stereochemistry.



RN 145616-96-2 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 3-[[(4-fluorophenyl)hydroxyphenylacetyl]oxy]-8,8-dimethyl-, bromide, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.

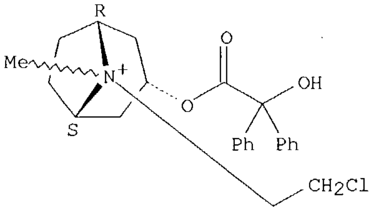


RN 145680-80-4 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-chloroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, endo- (9CI) (CA INDEX

NAME)

Relative stereochemistry.



● Br^-

L10 ANSWER 13 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1993:154616 CAPLUS

DN 118:154616

TI Antitussive and expectorant compositions containing anticholinergics

IN Takeda, Nobuko

PA ND New Drug Development Institute Inc., Japan

SO Eur. Pat. Appl., 12 pp.
CODEN: EPXXDW

DT **Patent**

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 529484	A1	19930303	EP 1992-114085	19920818
	R: BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	JP 05058911	A2	19930309	JP 1991-215502	19910827
PRAI	JP 1991-215502		19910827		

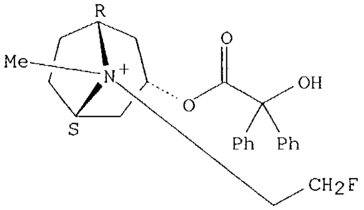
AB An antitussive and expectorant inhalant comprises a quaternary ammonium-type anticholine compound, preferably flutropium bromide (I). The composition exhibits very low toxicity, suppresses coughing, and improves difficulty in expectoration. I powder (0.05 part) having a particle size of ≤ 10 µm and 0.1 part soybean lecithin were placed in a pressure vessel and 100 parts of a propellant (Freon 12/Freon 11 = 70/30) was charged into the vessel under pressure. The content was cooled below -50° and filled into an Al container, then a quant. propellant dispenser, 30 µg I per spout, was fitted to the container.

IT **63516-07-4**, Flutropium bromide
RL: BIOL (Biological study)
(inhalation-type antitussive and expectorant composition containing)

RN 63516-07-4 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



Br^-

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L10  ANSWER 14 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1985:149580  CAPLUS
DN   102:149580
TI   Nortropine derivative and its therapeutic use
IN   Banholzer, Rolf
PA   Boehringer Ingelheim K.-G., Fed. Rep. Ger.
SO   Ger. Offen., 9 pp.
     CODEN: GWXXBX
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ---------------   ----  --------      ---------------  --------
PI   DE 3320138         A1   19841206      DE 1983-3320138  19830603
     US 4549021         A    19851022      US 1984-612790   19840522
     EP 128437          A2   19841219      EP 1984-106030   19840526
     EP 128437          A3   19851030
     EP 128437          B1   19880302
         R:  AT, BE, CH, DE, FR, GB, IT, LI, NL, SE
     AT 32719           E    19880315      AT 1984-106030   19840526
     JP 60006687        A2   19850114      JP 1984-112922   19840601
     JP 04046276        B4   19920729
     IL 71987           A1   19890731      IL 1984-71987    19840601
PRAI DE 1983-3320138         19830603
     EP 1984-106030          19840526
OS   CASREACT 102:149580
GI
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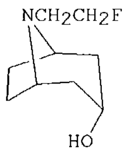

I

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AB   The spasmolytic (no data) N-(2-fluoroethyl)nortropine (I) was prepared
     Thus, nortropine was treated with BrCH2CH2F to give 87.2% I.HCl, which was
     converted to the benzilic acid ester.
IT   63516-27-8P
     RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
     (Reactant or reagent)
        (preparation and esterification with benzylic acid)
RN   63516-27-8  CAPLUS
CN   Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-(2-fluoroethyl)-8-
     azabicyclo[3.2.1]oct-3-yl ester, endo- (9CI)  (CA INDEX NAME)
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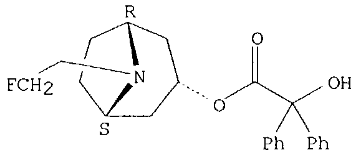
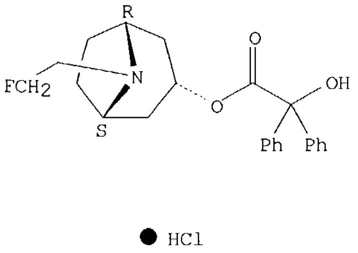
Relative stereochemistry.



```
IT   63516-06-3P
     RL: SPN (Synthetic preparation); PREP (Preparation)
        (preparation of)
RN   63516-06-3  CAPLUS
CN   Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-(2-fluoroethyl)-8-
     azabicyclo[3.2.1]oct-3-yl ester, hydrochloride, endo- (9CI)  (CA INDEX
     NAME)
```

Relative stereochemistry.



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L10  ANSWER 15 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1977:601855  CAPLUS
DN   87:201855
TI   Quaternary N-β-substituted benzylic acid N-alkyltropinic esters
IN   Banholzer, Rolf; Bauer, Rudolf; Heusner, Alex; Schulz, Werner
PA   Boehringer, C. H., Sohn, Fed. Rep. Ger.
SO   Ger. Offen., 25 pp.
     CODEN: GWXXBX
DT   Patent
LA   German
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.   DATE
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     DE 2540633         C2   19890119
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     AT 7606186         A    19790415
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     FI 7602590         A    19770313       FI 1976-2590      19760909
     FI 62083           B    19820730
     FI 62083           C    19821110
     FR 2323387         A1   19770408       FR 1976-27151     19760909
     FR 2323387         B1   19801010
     CH 621349          A    19810130       CH 1976-11455     19760909
     BE 846104          A1   19770310       BE 1976-170555    19760910
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     SE 428472          B    19830704
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     NO 145199          B    19811026
     NO 145199          C    19820203
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     NL 187210          B    19910201
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     ES 451467          A1   19771101       ES 1976-451467    19760911
     CA 1079733         A1   19800617       CA 1976-261037    19760913
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GI
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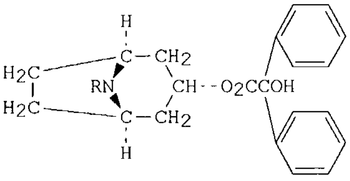

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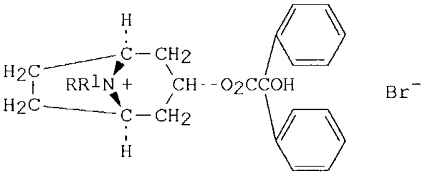


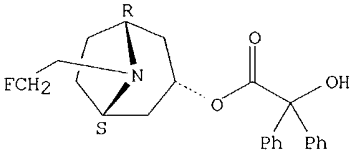
II

AB Title esters I (R = CH2CH2F, Et, Me, Bu, CH2CH2OH, CH2CH2Cl) and/or their hydrochlorides were prepared by alkylation of I (R = H) with alkyl bromides. I were quaternized by treatment with R1Br to II (R = same, R1 = Me, Et, Bu, etc.), which have spasmolytic properties (no data). Stereoisomers of II were obtained when R and R1 were reversed; e.g., I (R = Me) treated with FCH2CH2Br gave II (R : Me, R1 = CH2CH2F), which was a stereoisomer of the product obtained by treating I (R = CH2CH2F) with MeBr.

IT **63516-06-3P 63516-07-4P 63516-08-5P**
63516-09-6P 63516-10-9P 63516-11-0P
63516-12-1P 63516-13-2P 63516-14-3P
63516-15-4P 63516-16-5P 63516-17-6P
63516-18-7P 63516-19-8P 63516-20-1P
63516-21-2P 63516-22-3P 63516-23-4P
63516-24-5P 63516-25-6P 63516-26-7P
63537-42-8P 63541-98-0P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 63516-06-3 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-(2-fluoroethyl)-8-azabicyclo[3.2.1]oct-3-yl ester, hydrochloride, endo- (9CI) (CA INDEX NAME)

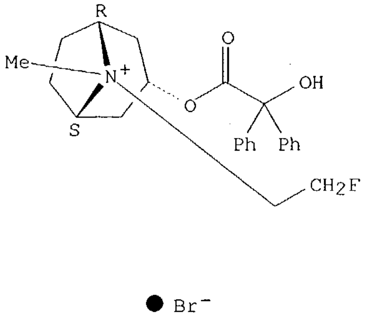
Relative stereochemistry.



● HCl

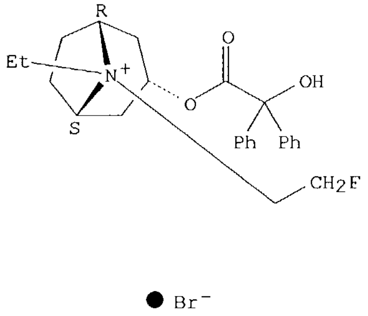
RN 63516-07-4 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (3-endo,8-syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



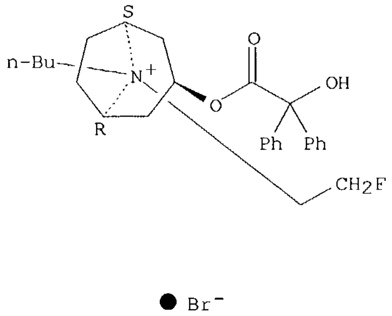
RN 63516-08-5 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-ethyl-8-(2-fluoroethyl)-3-
[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



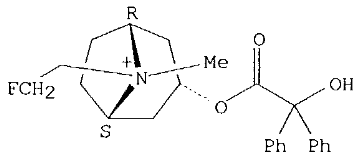
RN 63516-09-6 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-butyl-8-(2-fluoroethyl)-3-
[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 63516-10-9 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-fluoroethyl)-3-
[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (endo,anti)- (9CI) (CA
INDEX NAME)

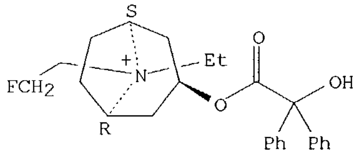
Relative stereochemistry.



● Br^-

RN 63516-11-0 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-ethyl-8-(2-fluoroethyl)-3-[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

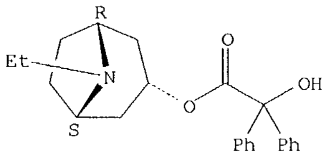
Relative stereochemistry.



● Br^-

RN 63516-12-1 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-ethyl-8-azabicyclo[3.2.1]oct-3-yl ester, hydrochloride, endo- (9CI) (CA INDEX NAME)

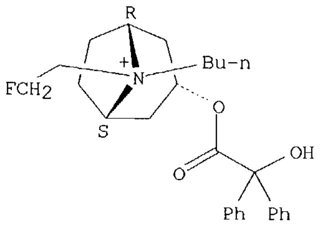
Relative stereochemistry.



● HCl

RN 63516-13-2 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-butyl-8-(2-fluoroethyl)-3-[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

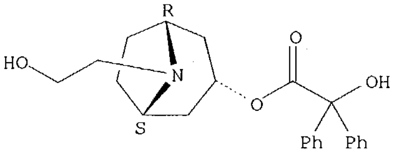
Relative stereochemistry.



● Br^-

RN 63516-14-3 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-(2-hydroxyethyl)-8-azabicyclo[3.2.1]oct-3-yl ester, hydrochloride, endo- (9CI) (CA INDEX NAME)

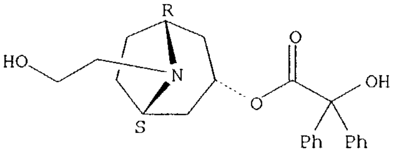
Relative stereochemistry.



● HCl

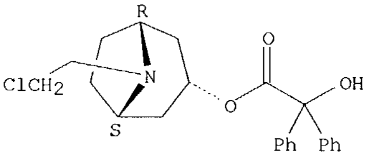
RN 63516-15-4 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-(2-hydroxyethyl)-8-azabicyclo[3.2.1]oct-3-yl ester, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 63516-16-5 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-(2-chloroethyl)-8-azabicyclo[3.2.1]oct-3-yl ester, hydrochloride, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.

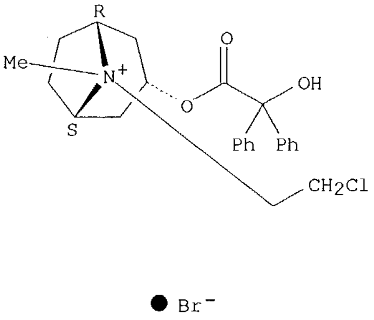


HCl

RN 63516-17-6 CAPLUS

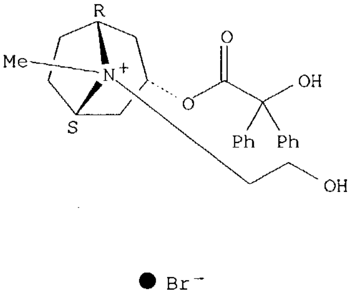
CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-chloroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



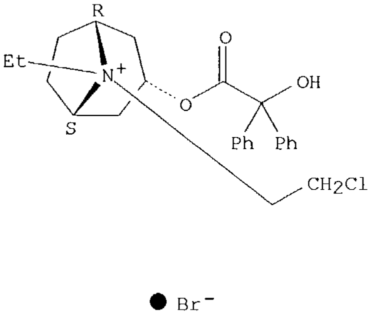
RN 63516-18-7 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 3-[(hydroxydiphenylacetyl)oxy]-8-(2-hydroxyethyl)-8-methyl-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



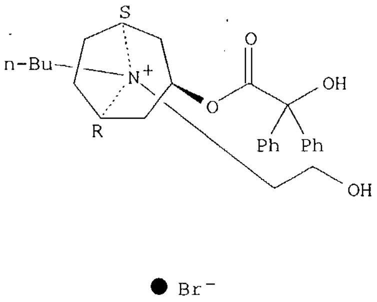
RN 63516-19-8 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-chloroethyl)-8-ethyl-3-[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



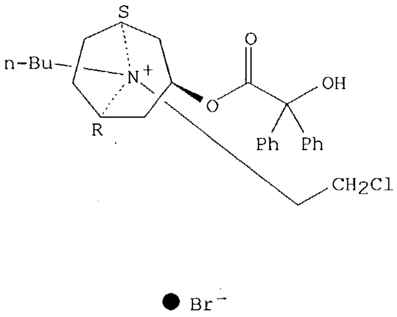
RN 63516-20-1 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-butyl-3-[(hydroxydiphenylacetyl)oxy]-8-(2-hydroxyethyl)-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



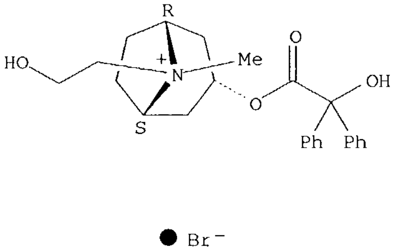
RN 63516-21-2 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-butyl-8-(2-chloroethyl)-3-[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



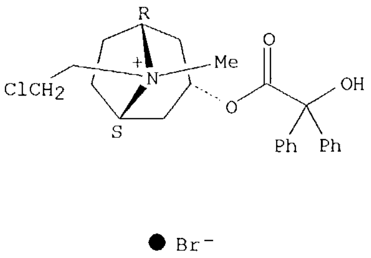
RN 63516-22-3 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 3-[(hydroxydiphenylacetyl)oxy]-8-(2-hydroxyethyl)-8-methyl-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 63516-23-4 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-chloroethyl)-3-[(hydroxydiphenylacetyl)oxy]-8-methyl-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

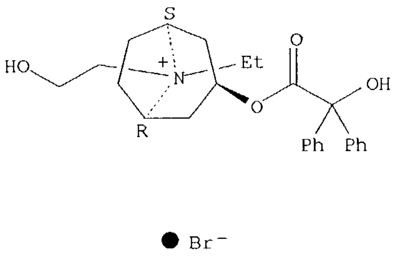
Relative stereochemistry.



RN 63516-24-5 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-ethyl-3-[(hydroxydiphenylacetyl)oxy]-8-(2-hydroxyethyl)-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

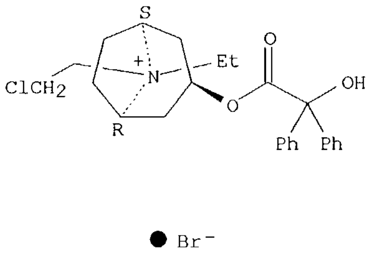
Relative stereochemistry.



RN 63516-25-6 CAPLUS

CN 8-Azoniabicyclo[3.2.1]octane, 8-(2-chloroethyl)-8-ethyl-3-[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

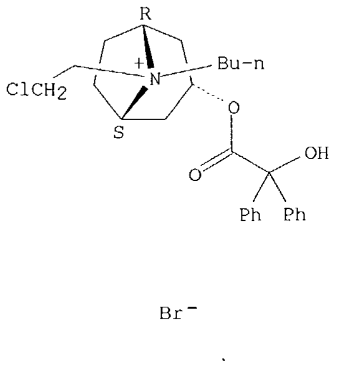
Relative stereochemistry.



RN 63516-26-7 CAPLUS

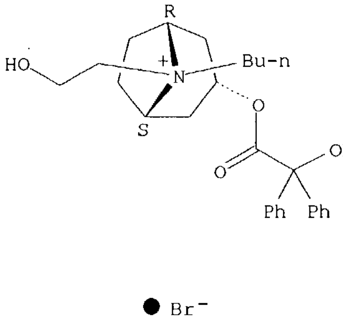
CN 8-Azoniabicyclo[3.2.1]octane, 8-butyl-8-(2-chloroethyl)-3-[(hydroxydiphenylacetyl)oxy]-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



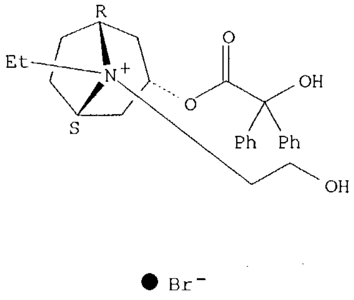
RN 63537-42-8 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-butyl-3-[(hydroxydiphenylacetyl)oxy]-8-(2-hydroxyethyl)-, bromide, (endo,anti)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



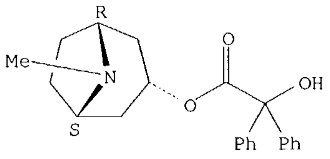
RN 63541-98-0 CAPLUS
CN 8-Azoniabicyclo[3.2.1]octane, 8-ethyl-3-[(hydroxydiphenylacetyl)oxy]-8-(2-hydroxyethyl)-, bromide, (endo,syn)- (9CI) (CA INDEX NAME)

Relative stereochemistry.



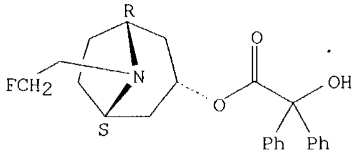
IT **3736-36-5 63516-27-8 63516-28-9**
63516-29-0
RL: RCT (Reactant); RACT (Reactant or reagent)
(quaternization of)
RN 3736-36-5 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



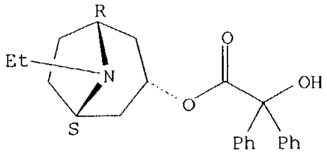
RN 63516-27-8 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-(2-fluoroethyl)-8-azabicyclo[3.2.1]oct-3-yl ester, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.



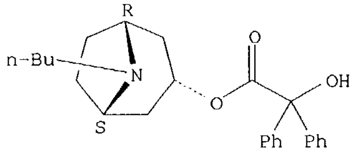
RN 63516-28-9 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-ethyl-8-azabicyclo[3.2.1]oct-3-yl ester, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 63516-29-0 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-butyl-8-azabicyclo[3.2.1]oct-3-yl ester, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.



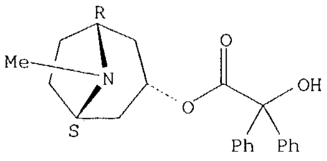
L10 ANSWER 16 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1971:498332 CAPLUS
DN 75:98332
TI Benzilic acid esters
IN Banholzer, Rolf
PA Boehringer, C. H., Sohn
SO Ger. Offen., 9 pp.
CODEN: GWXXBX
DT **Patent**
LA German
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2003680	A	19710805	DE 1970-2003680	19700128
	CH 566286	A	19750915	CH 1971-1068	19710125
	JP 56040147	B4	19810918	JP 1971-2579	19710126
	IL 36078	A1	19740630	IL 1971-36078	19710127
	ES 387646	A1	19750216	ES 1971-387646	19710127
	FR 2077109	A5	19711015	FR 1971-2877	19710128
	AT 308080	B	19730625	AT 1971-706	19710128
	AT 311959	B	19731210	AT 1972-5116	19710128
PRAI	DE 1970-2003680		19700128		
	DE 1970-2046659		19700922		

AB Title compds. Ph2C(OH)CO2R (I), intermediates (I), intermediates for pharmaceuticals, were prepared by the reaction of Ph2C(OH)CO2H with N,N'-carbonyldiimidazole at .apprx.20° in THF or CH2Cl2 and esterification of the N-(α-hydroxydiphenylacetyl)imidazole (II) formed with ROH. Thus, II was added in part, each after 15 min, to Et2NCH2CH2OH in refluxing Me2CO, the mixture was refluxed 5 hr and distilled, and the residue was treated with HCl (g) to give 93.4% I.HCl (R = CH2CH2NEt2). Similarly prepared were 7 other I, e.g. (R given): tropinyl and scopinyl.
IT **3736-36-5P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 3736-36-5 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.

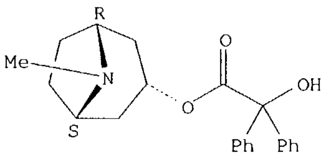


L10 ANSWER 17 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1967:443988 CAPLUS
DN 67:43988
TI Benzilic acid tropine ester hydrochloride
IN Fischer, Franz
PA Verla-Pharm Arzneimittelfabrik Apotheker H. J. von Ehrlich
SO Ger., 1 p.
CODEN: GWXXAW
DT **Patent**
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 1232157		19670112	DE	19630529

AB A mixture of 117 g. benzilic acid Pr ester, 32.7 g. tropine, and 0.68 g. Na was heated in vacuo for 8 hrs. at 120-45°. The reaction mixture was poured into 450 ml. 10% HCl solution and the acid solution washed 3-4 times with Et2O. Benzilic acid tropine ester (I) was separated by addition of 200 ml. concentrated NH4OH. After crystallization from C6H6 or iso-PrOH, 67 g. I, m. 152-3°, was obtained. HCl gas was passed through a solution of 10 g. I in 500 ml. C6H6 to precipitate I.HCl m. 240-1° (decomposition). The C6H6 filtrate was reused successively with 20 portions of 10 g. I.
IT **1674-94-8P 3736-36-5P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 1674-94-8 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, 8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester, hydrochloride, endo- (9CI) (CA INDEX NAME)

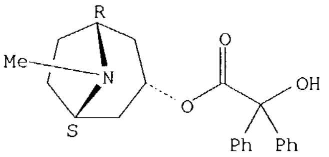
Relative stereochemistry.



● HCl

RN 3736-36-5 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



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L10  ANSWER 18 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1966:429415  CAPLUS
DN   65:29415
OREF 65:5447h,5448a-c
TI   Chlorination of alkylpyridines and alkylquinolines
PA   Midland Tar Distillers Ltd.
SO   16 pp.
DT   Patent
LA   Unavailable
FAN.CNT 1
     PATENT NO.       KIND  DATE          APPLICATION NO.  DATE
     ---------------  ----  --------      ---------------  --------
PI   BE 667939              19660207      BE
     NL 6510041                           NL
PRAI GB                     19640805
AB   Alkylpyridines and - quinolines were selectively chlorinated on the alkyl
     group in high yields by a high-temperature vapor-phase reaction with Cl in a
     quartz tube.  The alkyl heterocycle is diluted with steam, and preferred
     residence times are 1-12 sec. (unpacked tube) and 1-6 sec.
     (packed-preferably with SiC chips).  The degree of chlorination and yields
     vary with the molar ratio of reactant-steam-Cl, and with temperature, but
     preferred molar ratios are 20:1 steam-reactant and 0.1-3.0:1
     Cl-α-methylene group at 220-80° (packed) or >500°
     (unpacked).  Thus, 1 mole 2-picoline in 6 moles steam at 240-60°,
     and 1.1 moles Cl at 180-200° were pumped sep. into a quartz
     reaction tube maintained at 35-70°.  After 7.9 sec. residence time,
     the emergent gas was condensed and collected in 2N HCl.  The acid solution
     was extracted with CCl4, and the exts. distilled to give 2-dichloromethylpyridine-
     HCl.  Aqueous alkali was then added to the acid solution to pH 1, precipitating
     2-dichloromethylpyridine and a small amount of 2chloro-6-methylpyridine.
     The acid solution was further neutralized to pH 4.5 and extracted with Et2O to
     give 2-monochloromethylpyridine in 70% yield and high purity.  A final
     addition of alkali to the aqueous solution, followed by steam distillation, recovered
     unreacted 2-picoline, which was recycled.  Into a SiC-packed tube at
     240-65° were sep. pumped 1 mole 2-isopropylpyridine in 4 moles
     steam at 180-220°, and 1 mole Cl at 120-40°.  After
     residence of 3.5 sec., the product was worked up to yield
     2-(α-methyl-α-chloroethyl)pyridine, b7 69-70°.  The
     unstable free monochloroalkylheterocycles were stabilized by conversion to
     the HCl salt.
IT   3736-36-5, Benzilic acid, 3α-tropanyl ester
        (preparation of)
RN   3736-36-5  CAPLUS
CN   Benzeneacetic acid, α-hydroxy-α-phenyl-, (3-endo)-8-methyl-8-
     azabicyclo[3.2.1]oct-3-yl ester (9CI)  (CA INDEX NAME)

Relative stereochemistry.
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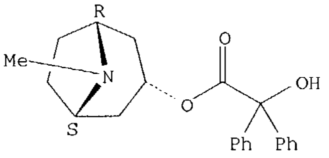

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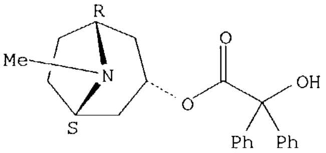
L10  ANSWER 19 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1966:429414  CAPLUS
DN   65:29414
OREF 65:5447g-h
TI   Benzilic esters
IN   Whitaker, Joel D.
```

PA Chemetron Corp.
SO 3 pp.
DT **Patent**
LA Unavailable
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3252981		19660524	US	19630524

AB Compds. of the formula Ph2C(OH)CO2R (I) (R = quinuclidinyl, tropinyl, or lower substituted piperidinyl) are prepared by a transesterification reaction of I (R = Me) and the corresponding ROH compound Thus, a mixture of 130 ml. dry PhMe, 2.9 g. NaOMe, 15 g. I (R = Me), and 5.2 g. 3-quinuclidinol was slowly heated with stirring while 65 ml. distillate containing MeOH was distilled The mixture was cooled, 60 ml. PhMe added, 25 ml. H2O added at 5°, the mixture kept at 0-5° 1 hr., and the precipitate filtered off and washed with 0-5° PhMe and then with 5° Me2CO to give 96.5% I (R = 3-quinuclidinyl), m. 164-6°. Similarly prepared were I (R = tropinyl), m. 146-8° and I (R = N-methyl-4-piperidinyl), m. 163°. The quaternary salts have useful antispasmodic and anticholinergic properties.
IT **3736-36-5**, Benzilic acid, 3α-tropanyl ester
(preparation of)
RN 3736-36-5 CAPLUS
CN Benzeneacetic acid, α-hydroxy-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

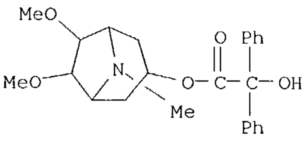
Relative stereochemistry.



L10 ANSWER 20 OF 21 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1963:462197 CAPLUS
DN 59:62197
OREF 59:11445c-e
TI Benzilic acid esters of 6,7-dimethoxytropine
IN Karrer, Paul; Kebrle, Jindrich
PA Sandoz Ltd.
SO 2 pp.; Addn. to Swiss 327,510
DT **Patent**
LA Unavailable

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 362699		19620815	CH	19571212

AB The preparation of 6,7-dimethoxytropine (I) and its benzilic acid ester (II) is described. Thus, 2,3,4,5-tetramethoxytetrahydrofuran (III), b12 95°, is prepared by refluxing 10 g. 2,5-dimethoxy-3,4-dihydroxytetrahydrofuran in a mixture of 300 ml. MeI and 80 g. Ag2O for 6 hrs. III is dissolved in 200 ml. 0.1N HCl and heated at 75° for 30 min. The cooled solution, containing [CH(OMe)CHO]2, is mixed with 14.6 g. CO(CH2CO2H)2, 6.75 g. MeNH3Cl, and 34 g. NaOAc in 900 ml. H2O. After 3 days at 25° the pH rises from 4.7 to 5.3, the solution is made alkaline with K2CO3, saturated with NaCl, and extracted with ether continuously for 72 hrs. to yield 80% 6,7-dimethoxytropinone, b0.05 105-10°; HCl salt (IV) m. 190° (decomposition); picrate m. 198-204° (decomposition). A solution of 5 g. IV in 800 ml. MeOH containing 0.25 g. Pt is hydrogenated at room temperature to yield the HCl salt of I, m. 207° (decomposition). A mixture of 7 g. I, 4.17 g. Ph2C(OH)CO2Me, and 0.18 g. Na is heated for 1 hr. at 100°/12 mm. and for 8 hrs. at 115°/1 mm. After being treated with 100 ml. 2N HCl, the aqueous solution is extracted with ether and made alkaline with KOH. The basic solution is then extracted with CHCl3 and the organic solution dried over MgSO4. The solvent is removed to yield 53% II, m. 135° (ether); HCl salt m. 253-6° (decomposition).
IT **107157-10-8**, Benzilic acid, 6,7-dimethoxy-3α-tropanyl ester
(preparation of)
RN 107157-10-8 CAPLUS
CN Benzilic acid, 6,7-dimethoxy-3α-tropanyl ester (7CI) (CA INDEX NAME)



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L10  ANSWER 21 OF 21  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1958:98091  CAPLUS
DN   52:98091
OREF 52:17314e-f
TI   Nortropanol esters
IN   Stoll, Arthur; Jucker, Ernst; Lindenmann, Adolf
PA   Sandoz Ltd.
DT   Patent
LA   Unavailable
FAN.CNT 1
     PATENT NO.       KIND  DATE           APPLICATION NO.  DATE
     ---------------  ----  --------       ---------------  --------
PI   CH 326779              19580215       CH
AB   Hydrogenation (Raney Ni) of 8-benzyl-6-ethoxy-3-nortropanone forms the
     corresponding nortropanol, b0.06 128°; this with Ph2C(OH)-CO2Et and
     Na yields 8-benzyl-6-ethoxy-3-nortropanyl benzilate, HCl salt, m.
     211-12°, which resembles atropine and scopolamine in action.
IT   121499-82-9, Benzilic acid, 8-benzyl-6-ethoxy-3-nortropanyl ester,
     hydrochloride
        (preparation of)
RN   121499-82-9  CAPLUS
CN   Benzilic acid, 8-benzyl-6-ethoxy-3-nortropanyl ester, hydrochloride (6CI)
     (CA INDEX NAME)
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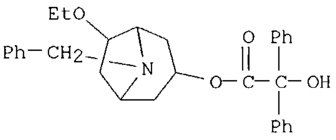

● HCl

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=> d l15 1-10 bib abs hitstr

L15  ANSWER 1 OF 10  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   2000:225452  CAPLUS
DN   132:319957
TI   Synthesis of 2,2-diphenylpropionate derivatives and their effects on
     larval growth of the silkworm
AU   Toyomura, Nozomu; Kim, In-Hae; Yoshida, Tetsuya; Shiotsuki, Takahiro;
     Kuwano, Eiichi
CS   Laboratory of Pesticide Chemistry, Division of Bioresource and
     Bioenvironmental Sciences, Graduate School, Kyushu University, Fukuoka,
     812-8581, Japan
SO   Bioscience, Biotechnology, and Biochemistry (2000), 64(3), 610-612
     CODEN: BBBIEJ; ISSN: 0916-8451
PB   Japan Society for Bioscience, Biotechnology, and Agrochemistry
DT   Journal
LA   English
AB   2,2-Diphenylpropionate derivs. with an amino substituent were synthesized
     and their effects on larval growth of the silkworm, Bombyx mori, were
     examined by dietary administration.  Of the compds. tested,
     3-(4-ethylpiperazin-1-yl)propyl 2,2-diphenyl-propionate (I) caused
     significant prolongation of the larval period.  Studies on the
     structure-activity relationship indicate that a piperazine ring and the
     bond distances between the nitrogen atom and the ester group were
     important for this activity.  Treatment with I delayed the increase of
     ecdysteroid titers in the hemolymph by 3 days, compared with that of the
     control, which correlates with the delay in molting.
IT   106784-74-1P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); BIOL (Biological
     study); PREP (Preparation)
        (preparation and effect on silkworm growth and hemolymph ecdysteroid titer)
RN   106784-74-1  CAPLUS
CN   Benzeneacetic acid, α-methyl-α-phenyl-, (3-endo)-8-methyl-8-
     azabicyclo[3.2.1]oct-3-yl ester (9CI)  (CA INDEX NAME)

Relative stereochemistry.
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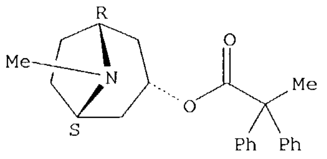

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RE.CNT  5     THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15  ANSWER 2 OF 10  CAPLUS  COPYRIGHT 2004 ACS on STN
AN   1999:167145  CAPLUS
DN   131:53556
TI   M3/M1-selective antimuscarinic tropinyl and piperidinyl esters
AU   Xu, Rong; Sim, Meng-Kwoon; Go, Mei-Lin
CS   Department of Pharmacy, National University of Singapore, Singapore,
     119260, Singapore
SO   European Journal of Pharmaceutical Sciences (1999), 8(1), 39-47
     CODEN: EPSCED; ISSN: 0928-0987
PB   Elsevier Science Ireland Ltd.
DT   Journal
LA   English
AB   The binding affinities of some tropinyl and piperidinyl esters for the
     submandibulary glands (M3/M1) and heart ventricle (M2) were determined from
     displacement expts. using 3H-labeled N-methylscopolamine as radioligand.
     The antimuscarinic activities of these esters were also evaluated on
     guinea pig bronchi.  The esters inhibited the M3-mediated
     carbachol-induced contraction of the bronchial smooth muscle and a
     reasonable correlation was obtained between the binding affinities of the
     esters for the submandibulary glands (pKm3,M1) and their inhibitory
     activities (pIC50) on guinea pig bronchi.  A promising compound,
     N-methylpiperidinyl cyclohexylphenylpropionate (NCPP) which combined good
     antimuscarinic activity (pA2=9.34) with a 20-fold selectivity at the M3/M1
     receptors, was identified.  Quant. structure-activity relationships (QSAR)
     showed that the size of the ester was the main structural feature determining
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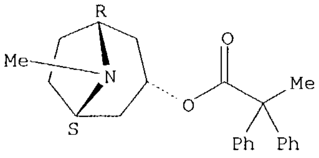
both binding affinity for the M3/M1 receptors and inhibitory activity on guinea pig bronchi. Esters with substituted acyl side chains (fewer hyperconjugable H atoms at the α-carbon) are generally associated with better activity and affinity.

IT **106784-74-1**
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)
(antimuscarinic tropinyl and piperidinyl esters binding affinity in rat submandibular gland and heart and functional activity in guinea pig bronchi)

RN 106784-74-1 CAPLUS

CN Benzeneacetic acid, α-methyl-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1998:733377 CAPLUS

DN 130:62382

TI Effect of tropine derivatives, antimuscarinic agents, on the growth of Bombyx mori larvae

AU Toyomura, Nozomu; Kuwano, Eiichi

CS Laboratory of Pesticide Chemistry, Department of Agricultural Chemistry, Kyushu University, Fukuoka, 812-8581, Japan

SO Bioscience, Biotechnology, and Biochemistry (1998), 62(10), 2046-2048
CODEN: BBBIEJ; ISSN: 0916-8451

PB Japan Society for Bioscience, Biotechnology, and Agrochemistry

DT Journal

LA English

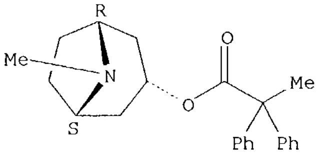
AB A number of atropine analogs were synthesized and their effects on larval growth of the silkworm, Bombyx mori, were investigated by both topical application and dietary administration. Among the tested compds., 8-methyl-8-azabicyclo[3.2.1]octan-3α-ol 2,2-diphenylpropionate (I), an antagonist of the muscarinic acetylcholine receptor in mammals, significantly prolonged the duration of the instar. When fed on I at 30 ppm, some of the larvae failed to molt. A 2,2-diphenylpropionate moiety was indispensable for this activity. I had more potent activity than atropine which is known to inhibit PTTH release in vitro.

IT **106784-74-1**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(effect of atropine derivs., antimuscarinic agents, on growth of Bombyx mori larvae)

RN 106784-74-1 CAPLUS

CN Benzeneacetic acid, α-methyl-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

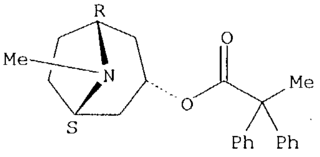
Relative stereochemistry.



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1998:133895 CAPLUS
DN 128:252519
TI Synthesis, antimuscarinic activity and quantitative structure-activity relationship (QSAR) of tropinyl and piperidinyl esters
AU Xu, Rong; Sim, Meng-Kwoon; Go, Mei-Lin
CS Dep. Pharmacy and Dep. Pharmacology, National Univ. Singapore, Singapore, 119260, Singapore
SO Chemical & Pharmaceutical Bulletin (1998), 46(2), 231-241
CODEN: CPBTAL; ISSN: 0009-2363
PB Pharmaceutical Society of Japan
DT Journal
LA English
AB A series of tropinyl and piperidinyl esters was synthesized and evaluated for inhibitory activities on the endothelial muscarinic receptors of rat (M3) and rabbit (M2) aorta. Some of the esters (cyclohexylphenylglycolates and cyclohexylphenylpropionates) were found to be better antimuscarinic compds. than standard M2 and M3 inhibitors such as AFDX116 and 4-diphenylacetoxy-N-methylpiperidine (DAMP), with pKEC50 values in the range of 8-9. A few esters were found to be more selective M3 than M2 inhibitors, but these tended to have low activities. The hydrophobic, electronic and steric characteristics of these esters were correlated with antimuscarinic activity by using appropriate parameters representing hydrophobicity (HPLC capacity factor, log kw), size (mol. volume) and electronic character (Taft's polar substituent constant σ^* and 13C chemical shift difference $\Delta\delta$). Finally, 92% of the M2-inhibitory activities of the esters could be accounted for by the size and electronic character σ^* of the side chain. In contrast, the M3-inhibitory activities of these esters were mainly attributed to the electronic nature (σ^*, $\Delta\delta$) of the side chain, with good activity being associated with electron-withdrawing groups. Visualization of the comparative mol. field anal. (CoMFA) steric and electrostatic fields provided further confirmation of the structure-activity relationship (SAR) derived from traditional quant. structure-activity relationship (QSAR) approaches.
IT **106784-74-1P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(preparation, antimuscarinic activity and quant. structure-activity relationship of tropinyl and piperidinyl esters)
RN 106784-74-1 CAPLUS
CN Benzeneacetic acid, α-methyl-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.

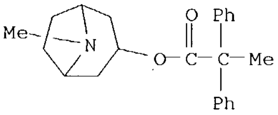


RE.CNT 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1997:213309 CAPLUS
DN 126:292958
TI Structure-hydrolyzability relationships in a series of piperidinyl and tropinyl esters with antimuscarinic activity
AU Xu, Rong; Go, Mei-Lin
CS Department of Pharmacy, National University of Singapore, 0511, Singapore
SO Chemical & Pharmaceutical Bulletin (1997), 45(3), 476-481
CODEN: CPBTAL; ISSN: 0009-2363
PB Pharmaceutical Society of Japan
DT Journal
LA English
AB The hydrolysis of a series of antimuscarinic tropinyl and N-methylpiperidinyl esters was investigated in 70% DMSO (DMSO) (0.1 M NaOH) at 25°. The hydrolysis followed pseudo-first order kinetics and the piperidinyl esters were hydrolyzed more rapidly than their

tropinyl counterparts. Variation in the acyl (R-CO) moiety of the esters generally affected the hydrolysis of piperidinyl and tropinyl esters in a similar manner, but the orientation of the acyl moiety (axial or equatorial) did not influence the hydrolysis rate. The influence of hydrophobic, electronic and steric factors on the hydrolysis was investigated by using appropriate parameters to represent the hydrophobicity (log kw), size (mol. volume MV) and electronic character (Taft's polar substituent constant σ* and 13C chemical shift difference Δδ of R) of the esters. These were correlated to the rate consts. of hydrolysis (pK1) by a series of regression equations. It was found that the hydrophobic character of the esters could account for 64% of the observed variation in pK1. However, a combination of σ* and mol. volume improved the correlation significantly, with r=0.94. The regression equation showed that an increase in the electron-withdrawing character of the acyl group R and a decrease in mol. volume of the ester favored hydrolysis.

IT **120253-84-1P**
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)
(hydrolysis of piperidinyl and tropinyl esters with antimuscarinic activity)
RN 120253-84-1 CAPLUS
CN Benzeneacetic acid, α-methyl-α-phenyl-, 8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)



RE.CNT 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

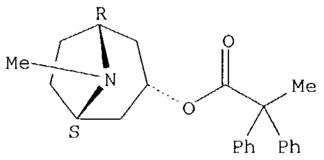
L15 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1990:91223 CAPLUS
DN 112:91223
TI Distance geometry of α-substituted 2,2-diphenylpropionate antimuscarinics
AU Gordon, Richard K.; Breuer, Eli; Padilla, Felipe N.; Smejkal, Ruthann M.; Chiang, Peter K.
CS Dep. Appl. Biochem., Walter Reed Army Inst. Res., Washington, DC, 20307-5100, USA
SO Molecular Pharmacology (1989), 36(5), 766-72
CODEN: MOPMA3; ISSN: 0026-895X
DT Journal
LA English
AB Quant. relationships between pharmacol. activities and phys. properties of a series of 2,2-diphenylpropionate compds. were used to define the topog. of the antagonist binding site of muscarinic receptors. XICAMM, a computer mol. modeling program, was used to calculate geometric and topol. values of the compds. The compds. were tested for their antimuscarinic activities by inhibition of [N-methyl-3H]scopolamine binding to the muscarinic receptors of N4TG1 neuroblastoma cells, by inhibition of carbachol-induced α-amylase release from rat pancreas acini, and by blocking acetylcholine-induced contraction of guinea pig ileum. To evaluate only the effect of the bond distance on the potency of the synthesized antimuscarinics, the compds. were designed to contain as many constant features as possible. Neither the hydrophobic nor the ester moieties of the compds. were changed, and the rings containing the protonated N saturated and restricted. The antimuscarinic activities obtained from the 3 assays correlated with each other, with the exception of 2 compds. The 2 compds. demonstrated specificity for the M3 muscarinic receptor subtype in the pancreas. The antimuscarinic activities were related to the bond distances between the carbonyl O (constant electroneg. locus) and the protonated N (center of cationic charge) of the 2,2-diphenylpropionate compds. Parabolic relationships between the pharmacol. activities and bond distances were empirically established. The shortest calculated bond distance of these compds. was .apprx.4.4 Å, whereas the longest was .apprx.5.9 Å. The maximum antimuscarinic potency was observed with a calculated bond distance of .apprx.5.2 Å in all 3 assays.
IT **106784-74-1P**

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and antimuscarinic effects of, mol. geometry and structure in relation to)

RN 106784-74-1 CAPLUS

CN Benzeneacetic acid, α-methyl-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



L15 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1989:187629 CAPLUS

DN 110:187629

TI Design and synthesis of antimuscarinics based on physical and mechanical attributes

AU Gordon, Richard K.; Smejkal, Ruthann M.; Breuer, Eli; Chiang, Peter K.

CS Dep. Appl. Biochem., Walter Reed Army Inst. Res., Washington, DC, 20307-5100, USA

SO Progress in Clinical and Biological Research (1989), 289(Comput.-Assisted Model. Recept.-Ligand Interact.), 465-70
CODEN: PCBRD2; ISSN: 0361-7742

DT Journal

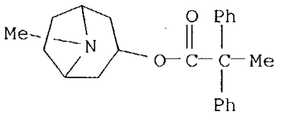
LA English

AB Antimuscarinics which mitigate the toxicity of organophosphate agents which bind with muscarinic receptors thus competing with the organophosphate were studied; distances between significant pairs of atoms in the antimuscarinic mols. were calculated and the relations between bond distances of the protonated nitrogens and carbonyl oxygens were linearly correlated with antimuscarinic potency in 3 biol. assays, i.e., inhibition of pig ileum contraction, α-amylase inhibition, and N-methylscopolamine binding by muscarinic receptors.

IT **120253-84-1**
RL: BIOL (Biological study)
(antimuscarinic activity of, organophosphate toxicity reversal in relation to)

RN 120253-84-1 CAPLUS

CN Benzeneacetic acid, α-methyl-α-phenyl-, 8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)



L15 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1963:477470 CAPLUS

DN 59:77470

OREF 59:14475h,14476a

TI Effect of atropine analogs on experimental bronchial spasm

AU Safrazbekyan, R. R.; Sukasyan, R. S.; Parsadanyan, R. G.

SO Izvestiya Akademii Nauk Armyanskoi SSR, Biologicheskie Nauki (1963), 16(5), 7-13
CODEN: IABNAW; ISSN: 0367-6579

DT Journal

LA Russian

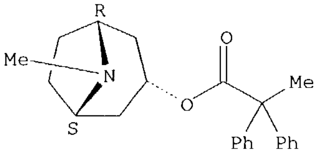
AB Expts. were carried out on cats narcotized with hexenal. The bronchomotor tone was measured by Turpaev's method (Fiziol. Zhur. SSSR 39(6), 732-4(1953)). Ten esters of tropine, tested in small doses, weakened the contraction of the bronchus caused by proserine. Methiodide of tropine ester of diphenylmethylacetic acid (0.05-0.2 mg./kg.) weakened the bronchial spasm provoked by proserine; 0.2 mg./kg. prevented spasm development after subsequent administration of proserine. In a dose 0.1 mg./kg. the same compd, inhibited the bronchial spasm observed during irritation of the vagus nerve.

IT **106784-80-9**, Propionic acid, 2,2-diphenyl-, 3α-tropanyl ester, hydrochloride
(bronchial spasm response to)

RN 106784-80-9 CAPLUS

CN Benzeneacetic acid, α-methyl-α-phenyl-, 8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester, hydrochloride, endo- (9CI) (CA INDEX NAME)

Relative stereochemistry.



● HCl

L15 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN

AN 1963:431335 CAPLUS

DN 59:31335

OREF 59:5665g-h,5666a

TI Relation of pharmacological action with chemical structure in a series of tropine esters

AU Mndzhoyan, A. L.; Papayan, G. L.; Safrazbekyan, R. R.; Ogandzhanyan, N. M.; Parsadanyan, R. G.; Sukasyan, R. S.

SO Izvestiya Akademii Nauk Armyanskoi SSR, Biologicheskie Nauki (1962), 15(12), 3-14
CODEN: IABNAW; ISSN: 0367-6579

DT Journal

LA Russian

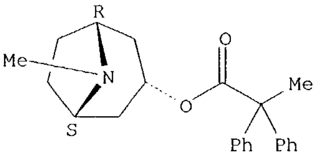
AB cf. CA 55, 9446e. The following esters of tropine with phenylcyclopentanecarboxylic acid (I), diphenylmethyl- (II), diphenylpropyl- (III), phenylpropyl- (IV), and phenylmethylacetic (V) acids, 4-methoxy, 3-methoxy-, 3,4- dimethoxy-, and 3,4,5-trimethoxybenzoic acids, fluorene-9-carboxylic acid (VI) and their hydrochlorides, methiodides, and ethiodides were synthesized to study their pharmacol. effects. The esters of I, II, III, IV, V, and VI show atropine-like properties, they depress acetylcholine contraction of the isolated intestine of cats, and they prevent the hypotensive action of acetylcholine in narcotized cats. Because of their M-cholinolytic effect, the methiodides are more active than the corresponding hydrochlorides and ethiodides. The methiodides of I and II esters decrease the acetytcholine contraction of cat intestine. The M-cholinolytic effect of the esters of benzoic acid derivs. is slight. Methiodides of I and II esters show a papaverine-like effect.

IT **106784-74-1**, Propionic acid, 2,2-diphenyl-, 3α-tropanyl ester
(pharmacology of)

RN 106784-74-1 CAPLUS

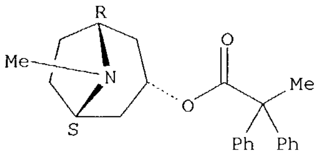
CN Benzeneacetic acid, α-methyl-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



L15 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2004 ACS on STN
AN 1960:81992 CAPLUS
DN 54:81992
OREF 54:15669c-d
TI Antagonism of the effects of tremorine by tropine derivatives
AU Farquharson, Muriel E.; Johnston, R. G.
CS Flockhart Research Labs., Edinburgh, UK
SO British Journal of Pharmacology and Chemotherapy (1959), 14, 559-66
CODEN: BJPCAL; ISSN: 0366-0826
DT Journal
LA Unavailable
AB The production in animals of Parkinson-like effects by tremorine (1,4-dipyrrolidino-2-butyne) and the inhibition of these effects in mice by a number of tropine derivs. were studied. No correlation was found between the activity against tremor and the anticholinergic, antihistaminic, or local anesthetic properties of the compds. tested.
IT **106784-74-1**, Propionic acid, 2,2-diphenyl-, 3α-tropanyl ester **111667-05-1**, Butyric acid, 2,2-diphenyl-, 3α-tropanyl ester
(antagonism to tremorine tremor)
RN 106784-74-1 CAPLUS
CN Benzeneacetic acid, α-methyl-α-phenyl-, (3-endo)-8-methyl-8-azabicyclo[3.2.1]oct-3-yl ester (9CI) (CA INDEX NAME)

Relative stereochemistry.



RN 111667-05-1 CAPLUS
CN Butyric acid, 2,2-diphenyl-, 3α-tropanyl ester (6CI) (CA INDEX NAME)

Relative stereochemistry.